

WE CLAIM:

1. A method of controlling the formation and deposition of thermoplastic fibers which are attenuated in a molten state by an air jet coming from a melt die, comprising:

- a) placing a deflection head in the air jet;
- b) monitoring the deflection head to obtain data on air jet momentum; and
- c) adjusting air jet momentum or other fiber formation parameters based on the data obtained from the monitoring to optimize formation and deposition of the thermoplastic fibers.

2. The method of Claim 1 further including: monitoring the deflection head at several points across the width of the melt die.

3. The method of Claim 1 further including: monitoring the deflection head at each lateral end of the melt die.

4. The method of Claim 1 further including: correcting non-uniformities in air flow from the melt die.

5. A nonwoven web of thermoplastic fibers made according to the method of Claim 1.

6. A method of controlling the momentum of an air jet used in making of thermoplastic fibers, comprising:

- a) placing a deflection beam in the air jet;
- b) monitoring the deflection beam to obtain data on air jet momentum; and
- c) adjusting the air jet momentum based on the data obtained from the monitoring.

7. The method of controlling the momentum of an air jet used in making of thermoplastic fibers according to Claim 6, further comprising:

- a) eliminating non-uniformities of air flow in the air jet, and
- b) extruding thermoplastic polymers from the air jet after eliminating the non-uniformities.

8. The method of controlling the momentum of an air jet used in making of thermoplastic fibers according to Claim 7, further comprising:

collecting the extruded polymers on a collection surface to form a nonwoven web.

9. A nonwoven web of thermoplastic fibers made according to the method of Claim 8.

10. An apparatus for the monitoring of the momentum of an air jet used in making of thermoplastic fibers, comprising:

- a) a cantilever arm for suspending a deflection head;
- b) a deflection head attached to the cantilever arm;
- c) the deflection head sized and shaped to accept the air jet momentum of a thermoplastic fiber extrusion apparatus;
- d) a transducer operably connected to the cantilever arm;
- e) a data output means connected to the transducer.

11. The apparatus for the monitoring of the momentum of an air jet used in making of thermoplastic fibers according to Claim 10, further comprising:

a mount for placing the cantilever arm in a position to hold the deflection head within the air jet.

12. The apparatus for the monitoring of the momentum of an air jet used in making of thermoplastic fibers according to Claim 11, further comprising:

the mount including a magnet.

13. An apparatus for the formation and deposition of thermoplastic fibers, comprising:

a) a melt die for the extrusion of molten thermoplastic polymers;  
b) an air jet for the forming of the molten thermoplastic polymers into fibers;

c) a forming wire for the collection of the fibers;  
d) a cantilever arm for suspending a deflection head;  
e) a deflection head attached to the cantilever arm;  
f) the deflection head extending into the air jet;  
g) a transducer operably connected to the cantilever arm;  
h) a data output means connected to the transducer; and  
i) a mount for placing the cantilever arm in a position to hold the deflection head within the air jet.